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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,649	01/06/2006	Kevin R. Boyle	GB030108	1976

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EXAMINER	
DUONG, DIEU HIEN	

ART UNIT	PAPER NUMBER
2821	

NOTIFICATION DATE	DELIVERY MODE
10/21/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No.	Applicant(s)	
	10/563,649	BOYLE, KEVIN R.	
	Examiner	Art Unit	
	DIEU HIEN T. DUONG	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *03* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 January 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/26/2008 has been entered. In virtue of this submission, claims 1-21 are currently in the instant application.

Specification

2. The disclosure is objected to because of the following informalities:

In page 1 of specification, after the title, the paragraph - -This application is a National Stage application of PCT application No. PCT/IB04/02235 07/02/2004- - should be inserted.

Appropriate correction is required.

Abstract

3. The abstract of the disclosure is objected to because the abstract is more than a single paragraph within the range of 50 to 150 words in length. Correction is required. See MPEP § 608.01(b).

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "an area between

the at least one feed pillar and the shorting pillar contains part of a bandwidth broadening resonant circuit " must be shown or the feature canceled from claim 18 (drawing 2 only show a remaining portion (36) of the bandwidth broadening resonant circuit residing on a circuit board). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 3, 6-7, 9, 12-14, 16, and 19-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Tracy et al. (US 2004/0252062 A1 of record), hereinafter "Tracy".

Regarding claim 1, Tracy discloses, in Figures 1-2 and 7 and par. [0033], lines 31-34, a communications device comprising a rf circuit (par [0033], lines 31-34) and an antenna connected by a self supporting member (140, 112, 114, 144, 148) having at least one feed pillar (140, 148, 112) and a shorting pillar (140, 144, 114) providing support, the pillars (140, 144, 148, 112, 114) being substantially permanently connected to respective contact points of the rf circuit and extending from the rf circuit to an antenna interface (Figure 1, surface between the conductive sheet 140 and connector 142) by a pressure connection.

Regarding claim 3, as applied to claim 1, Tracy discloses, in Figure 1 and paragraph [0019], wherein the self supporting member (140, 112, 114, 144, 148) is metallic.

Regarding claim 6, as applied to claim 1, Tracy discloses, in Figure 1, wherein the antenna is a PIFA.

Regarding claim 7, Tracy discloses, in Figures 1-2, 7 and par. [0033], lines 31-34, a rf module comprising a supporting member having rf circuit components thereon (see Figure 7) and a connector (140, 112, 114, 144, 148) to connect an rf output to an antenna (102, 104, 136), the connector (140, 112, 114, 144, 148) comprising an

electrically conductive, self supporting member (140, 112, 114, 144, 148) having at least one feed pillar (140, 148, 112) and a shorting pillar (140, 144, 114) providing support, the pillars being substantially permanently connected to respective contact points of the rf circuit components and extending from the rf circuit components to an antenna interface (Figure 1, surface between the conductive element 140 and connector 142) of the self supporting member, the antenna interface adapted for coupling to the antenna (102, 104, 136) by a pressure connection.

Regarding claim 9, as applied to claim 7, Tracy discloses, Tracy discloses, in Figures 1-2, and paragraph [0019], wherein the self supporting member is metallic.

Regarding claim 12, Tracy discloses, in Figures 1-2, 7 and paragraph [0033], an antenna comprising a signal propagating and/or receiving element having at least one rf feed termination (112) and a shorting termination (114) and an electrically conductive self supporting member (140, 144, 148) having an antenna interface (Figure 1, surface between the conductive element 140 and connector 142) and at least one feed pillar (140, 148) and a shorting pillar (140, 144) extending from the antenna interface, the pillars (140, 144, 148) adapted to be substantially permanently connected to respective contact points of an rf circuit, and the antenna interface providing a pressure connection with the at least one rf feed termination and the shorting termination (see Figure 7).

Regarding claim 13, as applied to claim 1, Tracy discloses, in Figures 1-2, wherein the antenna is further supported by mounting posts (116, 117) disposed between the antenna and the rf circuit around the antenna periphery.

Regarding claim 14, Tracy discloses, in paragraph [0033], further comprising a housing (710) and wherein the antenna is supported by the housing.

Regarding claim 16, Tracy discloses, in Figures 1-2 and paragraph [0019], lines 10-12, wherein the antenna interface is located to minimize differential mode currents.

Regarding claim 19, as applied to claim 12, Tracy discloses, in Figure 1-2, wherein the antenna includes at least one spring contact (142) to form the pressure connection with the antenna interface.

Regarding claim 20, as applied to claim 19, Tracy discloses, in Figures 1-2, wherein the pressure connection is located to minimize differential mode currents.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al. (US 2004/0252062 A1), hereinafter "Tracy" in view of Kadambi et al. (US 2002/0140612 A1), hereinafter "Kadambi".

Regarding claims 2 and 8, Tracy discloses, in Figures 1-2 and paragraph [0017], lines 14-18, the antenna comprising dual band; and the self supporting member having one feed pillar (140, 148, 112) disposed on either side of the shorting pillar (140, 144, 114).

Tracy does not disclose two feed pillars disposed one on either side of the shorting pillar.

Kadambi discloses, in Figure 5A, two feed pillars (16, 22) disposed one on either side of the shorting pillar (14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the feed of Tracy with the feed having two feed pillars disposed one on either side of the shorting pillar as taught by Kadambi in order to satisfy the gain performance of the antenna (see page 2, par. [0008], lines 42-45).

9. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al. (US 2004/0252062 A1), hereinafter "Tracy".

Tracy discloses every feature of claimed invention as expressly recited in claims 1 and 7, except for the self supporting member comprising a metallised insulating material.

However, such difference is not of patentable merits since it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the metallised insulating material to form the self supporting member and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

10. Claims 5, 11 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al. (US 2004/0252062 A1), hereinafter "Tracy" in view Koskiniemi et al. (US 2003/0098813 A1), hereinafter "Koskiniemi".

Regarding claims 5 and 11, as applied to claims 1 and 7 Tracy discloses every feature of claimed invention except for the self supporting member comprising a metallised insulating material having at least one embedded capacitor.

Even though, Tracy does not disclose the self supporting member comprising a metallised insulating material, such difference is not of patentable merits since it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the metallised insulating material to form the self supporting member and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Tracy does not disclose the self supporting member comprising at least one embedded capacitor.

Koskiniemi discloses, in Figure 7A, the self supporting member (707, 712, 715) comprising at least one embedded capacitor (716).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the capacitor of Koskiniemi in the self supporting member of Tracy to achieve the claimed invention, doing so would matching impedance of the antenna and its operating frequency band (see par. [0028], lines 15-21).

Regarding claim 21, as applied to claim 1,Tracy/Koskiniemi disclose, (Koskiniemi, Figures 7A-7B), wherein an area between the at least one feed pillar (715) and the shorting pillar (712) is adapted to accommodate at least port of a bandwidth broadening resonant circuit (716).

11. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al. (US 2004/0252062 A1), hereinafter "Tracy" in view of Poilasne et al. (US 2004/0095281 A1 of record).

Regarding claim 15, Tracy discloses, the antenna including a connector (142) to form the pressure connection with the antenna interface.

Tracy does not disclose the connector comprising a plurality of spring contacts.

Poilasne discloses, in Figure 1A, the connector (13) comprising a plurality of spring contacts (7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the connector of Tracy with the connector having a plurality of spring contacts as taught by Poilasne, doing so would provide a efficiency, low cost and small antenna (see par. [0006]).

Regarding claim 17, as applied to claim 15, Tracy/Poilasne disclose, (Tracy, Figures 1-2), the pressure connection is located to minimize differential mode currents.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tracy et al. (US 2004/0252062 A1), hereinafter "Tracy" in view of Poilasne et al. (US 2004/0095281 A1) and further in view of Koskiniemi et al. (US 2003/0098813 A1), hereinafter "Koskiniemi".

Regarding claim 18, Tracy and Poilasne disclose every feature of claimed invention as expressly recited in claim 17, except for wherein an area between the at least one feed pillar and the shorting pillar contains part of a bandwidth broadening

resonant circuit, a remaining portion of the bandwidth broadening resonant circuit residing on a circuit board that contains the rf circuit.

Koskiniemi discloses, in Figures 8A-8B and par. [0029], wherein an area between the at least one feed pillar (815) and the shorting pillar (812a, 812b) contains part of a bandwidth broadening resonant circuit (812a, 812b), a remaining portion of the bandwidth broadening resonant circuit (813) residing on a circuit board that contains the rf circuit.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the resonant circuit of Koskiniemi in the antenna of Tracy and Poilasne to achieve the claimed invention, doing so would matching impedance of the antenna and its operating frequency band (see par. [0028], lines 15-21).

Inquiry

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10/10/08
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